METHOD AND APPARATUS FOR MARKING AND IDENTIFYING LIQUIDS

Abstract

A liquid can be marked for identification purposes with at least first and second miscible markers. The markers are mixed in the liquid so that the ratio of the concentration of the first marker to the concentration of the second marker is substantially equal to a predetermined value. Thus, by comparing the ratio of the measured concentration of the first marker to the measured concentration of the second marker with predetermined values the liquid can be uniquely identified. In one embodiment, a multi-channel infrared fuel analyzer (10) is disclosed for identifying fuel samples in an examination vessel or flow tube (12). Radiation source (16) is provided on one side of tube (12) for illuminating the flowing fuel (14). Detectors (20A, 20B, and 20C) assigned to specific channels, are provided on the other side of the tube for detecting absorption associated with the presence of an assigned fuel marker. The infrared light source and detectors can be connected to a processor and control unit (22) for initiation of testing, for processing of detection signal from the detectors, and for display of readout information. Processor and control unit (22) can include a look up table (23) for storing information about marking patterns, a comparison element (35) for comparing measured values with values supplied by look up table (23), and a display (30).